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Influence of octupole interactions on the behavior of negative-parity states at low spins

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Abstract

The energies of negative-parity levels based on two-particle states exhibit a nonlinear behavior at low spins versus the core-rotation energy because the alignment process has not yet been completed for them. This behavior of negative-parity levels in the low-spin region is satisfactorily described upon the inclusion of octupole-octupole interactions. This is demonstrated within the rotational model involving the Coriolis mixing of states for the even-even isotopes 162-168Hf. © Nauka/Interperiodica 2006.

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